### **Listing of Claims**:

1. (Currently amended) A compound Compounds of the formula I

in which

W denotes is CH or N,

 $R^{1}$ ,  $R^{2}$ ,  $R^{3}$ , independently of one another, denote are H, R, A, aryl, heteroaryl, Hal, -(CY<sub>2</sub>)<sub>n</sub>-SA, -(CY<sub>2</sub>)<sub>n</sub>-SCF<sub>3</sub>, -(CY<sub>2</sub>)<sub>n</sub>-SCN,  $-(CY_2)_n$ -CF<sub>3</sub>,  $-(CY_2)_n$ -OCF<sub>3</sub>, cycloalkyl, -SCH<sub>3</sub>, -SCN, -CF<sub>3</sub>, -OCF<sub>3</sub>, -OA, -(CY<sub>2</sub>)<sub>n</sub>-OH,  $-(CY_2)_n-CO_2R$ ,  $-(CY_2)_n-CN$ ,  $-(CY_2)_n-Hal$ ,  $-(CY_2)_n-NR_2$ ,  $(CY_2)_n$ -OA,  $(CY_2)_n$ -OCOA, -SCF<sub>3</sub>,  $(CY_2)_n$ -CONR<sub>2</sub>, - $(CY_2)_n$ -NHCOA,  $-(CY_2)_n$ -NHSO<sub>2</sub>A, SF<sub>5</sub>, Si(CH<sub>3</sub>)<sub>3</sub>, CO-(CY<sub>2</sub>)<sub>n</sub>- $CH_3$ ,  $-(CY_2)_n$ -N-pyrrolidone,  $CH(CH_2)_nNRCOOR$ , CHNRCOOR, NCO, CH(CH<sub>2</sub>)<sub>n</sub>COOR, NCOOR, CH(CH<sub>2</sub>)<sub>n</sub>OH, N(CH<sub>2</sub>)<sub>n</sub>OH, CHNH<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, C(OH)R, CHNCOR, CH(CH<sub>2</sub>)<sub>n</sub>-aryl, CH(CH<sub>2</sub>)<sub>n</sub>--heteroaryl, CH(CH<sub>2</sub>)<sub>n</sub>R<sup>1</sup>,  $N(CH_2)_nCOOR$ ,  $CH(CH_2)_nX(CH_2)_n$ -aryl,  $CH(CH_2)_nX(CH_2)_n$ heteroaryl, N(CH<sub>2</sub>)<sub>n</sub>CONR<sub>2</sub>, XCONR(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>,  $N[(CH_2)_nXCOOR]CO(CH_2)_n$ -aryl,  $N[(CH_2)_nXR]CO(CH_2)_n$ -aryl,  $N[(CH_2)_nXR]CO(CH_2)_nX$ -aryl,  $N[(CH_2)_nXR]SO_2(CH_2)_n$ -aryl,  $N[(CH_2)_nNRCOOR]CO(CH_2)_n$ -aryl,  $N[(CH_2)_nNR_2]CO(CH_2)_n$ aryl,  $N[(CH_2)_nNR_2]CO(CH_2)_nNR$ -aryl,  $N[(CH_2)_nNR_2]SO_2(CH_2)_n$ -aryl,  $N[(CH_2)_nXR]CO(CH_2)_n$ heteroaryl, N[(CH<sub>2</sub>)<sub>n</sub>XR]CO(CH<sub>2</sub>)<sub>n</sub>X-heteroaryl,

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$$\begin{split} &N[(CH_2)_nXR]SO_2(CH_2)_n-heteroaryl,\\ &N[(CH_2)_nNRCOOR]CO(CH_2)_n-heteroaryl,\\ &N[(CH_2)_nNR_2]CO(CH_2)_n-heteroaryl,\\ &N[(CH_2)_nNR_2]CO(CH_2)_nNR-heteroaryl,\\ &N[(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\\ &O(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\\ &O(CH_2)_nNR_2,\\ &O(CH_2)_n$$

- Y denotes is H, A, or Hal
- A denotes <u>is</u> alkyl or cycloalkyl, in which one or more H atoms optionally are substituted <del>may be replaced</del> by Hal,
- Hal denotes is F, Cl, Br or I,
- R denotes is H or A, in the case of geminal radicals R together also is  $-(CH_2)_5$ -,  $-(CH_2)_4$ -,  $-(CH_2)_2$ -X- $(CH_2)_2$  or  $-(CH_2)_2$ -Z- $(CH_2)_n$ ,
- R<sup>4</sup>, R<sup>5</sup>, independently of one another, denote <u>are</u> H or an unsubstituted or mono- or <del>poly</del> <u>poly-substituted</u> -OR-, NO<sub>2</sub>-, Hal-, CF<sub>3</sub>-, OCF<sub>3</sub>-, CN-, NR<sub>2</sub>-, or SR-, aryl-, or heteroaryl-substituted N-pyrrolidone <del>radical</del>, -X-(CH<sub>2</sub>)<sub>2</sub>OR, -X-CO(CH<sub>2</sub>)<sub>n</sub>CH<sub>3</sub>, -X-(CH<sub>2</sub>)<sub>2</sub>NR<sub>2</sub>, R<sup>1</sup>, S-aryl, O-aryl, CH<sub>2</sub>Si(CH<sub>3</sub>)<sub>3</sub>, or together denote <u>are</u> -X(CR<sub>2</sub>)<sub>2</sub>-, -X-(CR<sub>2</sub>)<sub>3</sub>-, -X-(CHCH<sub>2</sub>OR)(CH<sub>2</sub>)<sub>2</sub>-, -X-(CH<sub>2</sub>)<sub>2</sub>NR<sub>2</sub>, -(CR<sub>2</sub>)<sub>3</sub>-, -(CR<sub>2</sub>)<sub>4</sub>-,-CR=CR-CR=CR-, -XCHQ(CR<sub>2</sub>)<sub>2</sub>-, -XCHQCR<sub>2</sub>-, R-N-(C=X)-N-R, or -XC[(CH<sub>2</sub>)nOR]<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-,

X denotes is O, S or NR

Q denotes is CH<sub>2</sub>Hal, CHO, COR<sup>a</sup>, CH<sub>2</sub>Ra, CH<sub>2</sub>OCORa, CH<sub>2</sub>NCOR<sup>1</sup>, CH<sub>2</sub>N(R<sup>1</sup>)<sub>2</sub>, CH<sub>2</sub>OR<sup>1</sup>, CH<sub>2</sub>OCON(R<sup>1</sup>)<sub>2</sub>, CH<sub>2</sub>OCOOR<sup>1</sup>, CH<sub>2</sub>NHCON(R<sup>1</sup>)<sub>2</sub>, or CH<sub>2</sub>NHCOOR<sup>1</sup>,

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### Preliminary Amendment

$$(CH_2)_n - [X(CH_2)_n]_m - N, \qquad HN - N, \qquad HN$$

Z denotes is CH<sub>2</sub>, X, CHCONH<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NRCOOR,
CHNRCOOR, NCO, CH(CH<sub>2</sub>)<sub>n</sub>COOR, NCOOR, CH(CH<sub>2</sub>)<sub>n</sub>OH,
N(CH<sub>2</sub>)<sub>n</sub>OH, CHNH<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, C(OH)R,
CHNCOR, CH(CH<sub>2</sub>)<sub>n</sub>-aryl, CH(CH<sub>2</sub>)<sub>n</sub>-heteroaryl, CH(CH<sub>2</sub>)<sub>n</sub>R<sup>1</sup>,

$$\begin{split} &N(CH_2)_nCOOR,\ CH(CH_2)_nX(CH_2)_n-aryl,\ CH(CH_2)_nX(CH_2)_n-heteroaryl,\ N(CH_2)_nCONR_2,\ XCONR(CH_2)_nNR_2,\\ &N[(CH_2)_nXCOOR]CO(CH_2)_n-aryl,\ N[(CH_2)_nXR]CO(CH_2)_n-aryl,\ N[(CH_2)_nXR]SO_2(CH_2)_n-aryl,\ N[(CH_2)_nNRCOOR]CO(CH_2)_n-aryl,\ N[(CH_2)_nNR_2]CO(CH_2)_n-aryl,\ N[(CH_2)_nNR_2]CO(CH_2)_n-aryl,\ N[(CH_2)_nNR_2]SO_2(CH_2)_n-aryl,\ N[(CH_2)_nXR]CO(CH_2)_n-heteroaryl,\ N[(CH_2)_nXR]SO_2(CH_2)_n-heteroaryl,\ N[(CH_2)_nXR]SO_2(CH_2)_n-heteroaryl,\ N[(CH_2)_nNRCOOR]CO(CH_2)_n-heteroaryl,\ N[(CH_2)_nNR_2]CO(CH_2)_n-heteroaryl,\ N[(CH_2)_nNR_2]CO(CH_2)_n-heteroaryl,\ N[(CH_2)_nNR_2]CO(CH_2)_n-heteroaryl,\ N[(CH_2)_nNR_2]CO(CH_2)_n-heteroaryl,\ N[(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\ N[(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\ O(CH_2)_nNR_2,\ X(CH_2)_nNR_2,\ N[(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\ O(CH_2)_nNR_2,\ N[(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\ O(CH_2)_nNR_2,\ N[(CH_2)_nNR_2]SO_2(CH_2)_n-heteroaryl,\ N[(CH_2)$$

denotes is aryl or heteroaryl, each of which is unsubstituted or mono- or polysubstituted by aryl or heteroaryl, each of which is optionally may be substituted by Hal, NO<sub>2</sub>, CN, A, OR, OCOR, COR, NR<sub>2</sub>, CF<sub>3</sub>, OCF<sub>3</sub>, OCH(CF<sub>3</sub>)<sub>2</sub>, or by Hal, NO<sub>2</sub>, CN, OR, A, -(CY<sub>2</sub>)<sub>n</sub>-OR, -OCOR, -(CY<sub>2</sub>)<sub>n</sub>-CO<sub>2</sub>R, -(CY<sub>2</sub>)<sub>n</sub>-CN, -NCOR, -COR or -(CY<sub>2</sub>)<sub>n</sub>-NR<sub>2</sub>,

 $R^7$  denotes is (C=O)-R, (C=O)-NR<sub>2</sub>, (C=O)-OR, H or A,

m <u>denotes is</u> 0, 1 or 2,

and

n denotes is 0, 1, 2, 3, 4, 5, 6 or 7,

and <u>or a pharmaceutically usable derivatives</u>, solvates, tautomers, salts and, stereoisomers thereof, including or mixtures thereof in all any ratios.

- 2. (Currently amended) <u>The</u> compounds according to Claim 1, <u>or a</u>

  <u>pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer</u>

  <u>thereof or mixture thereof in any ratio,</u> in which
  - R<sup>1</sup> denotes is A, CF<sub>3</sub>, OCF<sub>3</sub>, SA, SCN, CH<sub>2</sub>CN, -OCOA, Hal, SCF<sub>3</sub>, t-butyl, -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, isopropyl, ethyl or methyl.
  - 3. (Currently amended) <u>The</u> compounds according to Claim 1 <del>or 2</del> <u>or</u> a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio in which

    R<sup>2</sup> denotes is F or H.
  - 4. (Currently amended) <u>The</u> compounds according to one or more of Claims 1-3 Claim 1 or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio in which R<sup>3</sup> denotes is F or H.
- 5. (Currently amended) The compounds according to one or more of Claims

  1-4 Claim 1 or a pharmaceutically usable derivative, solvate, tautomer,

  salt, stereoisomer thereof or mixture thereof in any ratio in which

  R<sup>4</sup> preferably denotes is one of the following groups if R<sup>5</sup>

  denotes H:

$$O = \bigvee_{N} \qquad \text{or} \qquad -X-(CH_2)_2-NR_2$$

X and R have the meaning indicated in Claim 1.

- 6. (Currently amended) <u>The</u> compounds according to one or more of Claims

  1–5 <u>Claim 1 or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio in which

  R<sup>5</sup> <u>denotes is H.</u></u>
- 7. (Currently amended) <u>The</u> compounds according to one or more of Claims

  1-6 <u>Claim 1 or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio in which

  R<sup>5</sup>, together with R<sup>4</sup>, adopts are one of the following meanings:</u>

in which

X, R and R<sup>a</sup> have the meaning indicated in Claim 1.

- 8. (Currently amended) <u>The</u> compounds according to <u>Claim 1 or a</u>

  pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer

  thereof or mixture thereof in any ratio one or more of Claims 1-7 in which
  - R<sup>6</sup> denotes <u>is</u> phenyl, 2-, 3- or 4-pyridyl, pyrimidyl, furyl or thienyl, each of which is unsubstituted or mono- or polysubstituted by Hal, CN, NO<sub>2</sub>, OH, CF<sub>3</sub>, OCH(CF<sub>3</sub>)<sub>2</sub>, OCOCH<sub>3</sub> or A.
- 9. (Currently amended) <u>The</u> compounds according to <u>Claim 1 or a</u>

  pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer

  thereof or mixture thereof in any ratio one or more of Claims 1-8 in which

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R<sup>6</sup> denotes is one of the following groups:

- 10. (Currently amended) <u>The</u> compounds according to Claim 1 <u>or a</u>

  pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer

  thereof or mixture thereof in any ratio one or more of Claims 1-9 in which
  - R<sup>7</sup> denotes is H.
- 11. (Currently amended) <u>The</u> compounds <u>according to Claim 1</u>, <u>selected from the group consisting</u> of the sub-formulae IA to ID <u>or a pharmaceutically usable derivative</u>, <u>solvate</u>, <u>tautomer</u>, <u>salt</u>, <u>stereoisomer thereof or mixture thereof in any ratio</u>:

$$R^{1}$$
 $R^{3}$ 
 $R^{2}$ 
 $R^{7}$ 
 $R^{6}$ 
 $R^{8}$ 

$$R^{1}$$
 $R^{3}$ 
 $R^{3}$ 
 $R^{2}$ 
 $R^{7}$ 
 $R^{6}$ 
 $R^{6}$ 

$$R^{1}$$
 $R^{3}$ 
 $R^{2}$ 
 $R^{7}$ 
 $R^{6}$ 

$$R^{1}$$
 $R^{3}$ 
 $R^{2}$ 
 $R^{7}$ 
 $R^{6}$ 
 $R^{6}$ 

in which R, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> and X have the meaning indicated in Claim 1.

and

 $R^8$  denotes is H,  $CH_2OR$  or  $CH_2NR_2$ .

12. (Currently amended) <u>The</u> compounds <u>according to Claim 1</u> of the subformulae A <u>and or</u> B <u>or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio</u>:

$$R^1$$
 $R^4$ 
 $R^5$ 
 $R^5$ 
 $R^6$ 
 $R^7$ 
 $R^6$ 

in which R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup> have the meaning indicated in Claim 1, and the <u>race mate racemate</u> thereof or <u>any</u> other mixtures of the enantiomers thereof.

13. (Currently amended) <u>The</u> compounds <u>according to Claim 1</u> of the subformulae I1 to I45a, or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio:

14. (Currently amended) A method for preparing the compound process for the preparation of compounds of the formula I according to Claims 1-13

Claim 1 and or a pharmaceutically usable derivatives, salts, solvates, tautomers and, stereoisomers thereof or mixture thereof in any ratio, comprising characterised in that

a compound of the formula II

$$R^1$$
 $R^3$ 
 $NH_2$ 

in which R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> have the meanings indicated in Claim 1,

is reacted with a compound of the formula III

in which

R<sup>6</sup> has the meaning indicated in Claim 1,

and

with a compound of the formula IV, the double-bond isomer thereof (E isomer) or mixtures thereof

$$R^4$$
  $R^5$  IV

in which R<sup>4</sup> and R<sup>5</sup> have the meanings indicated in Claim 1,

and, <u>optionally</u> if <u>desired</u>, a radical R<sup>7</sup> which denotes H is converted into a radical R<sup>7</sup> which has a meaning other than H,

and/or, optionally if desired, a base or acid of the formula I is converted into one of its salts.

- 15. (Currently amended) Process The method according to Claim 14, wherein characterised in that the reaction is carried out in the presence of a protonic acid or Lewis acid.
- 16. (Currently amended) Process The method according to Claim 14 or 15, characterised in that wherein the reaction is carried out in the presence of trifluoroacetic acid, hexafluoroisopropanol, bismuth(III) chloride, ytterbium(III) triflate, scandium(III) triflate or cerium(IV) ammonium nitrate.
- 17. (Currently amended) Medicaments comprising at least one compound of the formula I The compound according to Claim 1 to 13 and/or or a pharmaceutically usable derivatives, salts, solvates, tautomers, and stereoisomers thereof, including or mixtures thereof in all any ratios, and optionally an excipients and/or an adjuvants, in a pharmaceutical formulation.
- 18. (Currently amended) A mixture Mixture comprise comprising one or more the compounds of the formula I according to Claim 1, or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio, and an amount of one or more a compounds of the formula V, or an analogues thereof and/or a metabolites thereof

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$$R^{11}$$
  $Y'$   $(CH_2)_p$   $Z'$   $R^8$ 

in which

Y' and Z' each, independently of one another, denote <u>are</u> O or N, R<sup>9</sup> and R<sup>10</sup> each, independently of one another, denote <u>are</u> H, OH, halogen, OC1-10-alkyl, OCF<sub>3</sub>, NO<sub>2</sub> or NH<sub>2</sub>, n-denotes p is an integer between 2 and 6 inclusive inclusively, and R<sup>8</sup> and R<sup>11</sup> are each, independently of one another, in the meta- or para-position and are selected from the group consisting of:

- 19. (Currently amended) Use The mixture according to Claim 18, where the compound of the formula V used are pentamidine or salts thereof.
- 20. (Currently amended) Use of A method comprising administering to a patient the compounds according to Claim 1 to 13 and or a pharmaceutically usable derivatives, salts, solvates, tautomers, and stereoisomers thereof, including or a mixtures thereof in all any ratios, or the mixture according to Claim 18, for the preparation of a medicament for

the treatment of diseases which can be are influenced by the inhibition, regulation and/or modulation of the mitotic motor protein Eg5.

- 21. (Currently amended) Use of A method comprising administering to a patient the compound according to Claim 1 to 13 or the mixture according to Claim 18 for the preparation of a medicament for the treatment and prophylaxis of cancer diseases.
- 22. (Currently amended) Use The method according to Claim 21, where the cancer is diseases are associated with a tumour from the group of tumours of the squamous epithelium, of the bladder, of the stomach, of the kidneys, of head and neck, of the oesophagus, of the cervix, of the thyroid, of the intestine, of the liver, of the brain, of the prostate, of the urogenital tract, of the lymphatic system, of the stomach, of the larynx and/or of the lung.
- 23. (Currently amended) Use The method according to Claim 22 Claim 21, where the tumour cancer originates from the group monocytic leukaemia, lung adenocarcinoma, small-cell lung carcinomas, pancreatic cancer, glioblastomas, and breast carcinoma and or colon carcinoma.
- 24. (Currently amended) Use The method according to Claim 21, where the cancer disease to be treated is a tumour of the blood and immune system.
- 25. (Currently amended) Use The method according to Claim 24, where the cancer tumour originates from the group acute myelotic leukaemia, chronic myelotic leukaemia, acute lymphatic leukaemia and/or chronic lymphatic leukaemia.
- 26. (Currently amended) Use of compounds of the formula I according to A method comprising administering to a patient the compound of Claim 1 to

13 and/or <u>a physiologically acceptable pharmaceutically usable</u> salts and , solvates, tautomer, stereoisomer thereof or mixture thereof <u>in any ratio</u>, for the preparation of a medicament for the treatment of tumours <u>cancer</u> in combination with a therapeutically effective amount of <u>one or more a</u> compounds of the formula V, <u>or an</u> analogues thereof and/or <u>a</u> metabolites thereof.

$$R^{11}$$
  $Y'$   $(CH_2)_p$   $Z'$   $R^8$ 

in which

Y' and Z' each, independently of one another, denote <u>are</u> O or N, R<sup>9</sup> and R<sup>10</sup> each, independently of one another, denote <u>are</u> H, OH, halogen, OC1-10-alkyl, OCF<sub>3</sub>, NO<sub>2</sub> or NH<sub>2</sub>, n-denotes p is an integer between 2 and 6 inclusive inclusively, and R<sup>8</sup> and R<sup>11</sup> are each, independently of one another, in the meta- or para-position and are selected from the group consisting of:

#### where

the compounds of the formula I and the compounds of the formula V, <u>or an</u> analogues thereof and/or <u>a</u> metabolites thereof <del>are</del> is administered

simultaneously or within 14 days of one another in amounts which are sufficient to inhibit the growth of a tumour or of other hyperproliferative cells.

- 27. (Currently amended) Use The method according to Claim 26, where the compound of the formula V used are pentamidine or salts thereof.
- 28. (Currently amended) Use of compounds of the formula I A method comprising administering to a patient, a therapeutically effective amount of the compound according to Claim 1 to 13 and/or physiologically acceptable a pharmaceutically usable salt, and solvates, tautomer, stereoisomer thereof or mixture thereof in any ratio for the preparation of a medicament for the treatment of the cancer tumours where a therapeutically effective amount of a compound of the formula I is administered in combination with radiotherapy and a compound selected from the group consisting of 1) an oestrogen receptor modulator, 2) an androgen receptor modulator, 3) a retinoid receptor modulator, 4) a cytotoxic agent, 5) an antiproliferative agent, 6) a prenyl-protein transferase inhibitor, 7) an HMG-CoA reductase inhibitor, 8) an HIV protease inhibitor, 9) a reverse transcriptase inhibitor and 10) further an angiogenesis inhibitors.
- 29. (Currently amended) <u>The</u> compounds of the formula I in which Q denotes CH2R<sup>a</sup>, and R<sup>a</sup> has <u>is</u> one of the followings meanings: NHR<sub>2</sub>, NR<sub>2</sub>, NR(CH<sub>2</sub>)<sub>n</sub>aryl, NR(CH<sub>2</sub>)<sub>n</sub>OR, COOR, N-pyrrolidone radical, OCOR, NR(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, N[(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>]CO(CH<sub>2</sub>)<sub>n</sub>aryl, N[(CH<sub>2</sub>)<sub>n</sub>NHCOOR]COaryl, R<sup>1</sup>, N[CH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>OR]<sub>2</sub>, NR(CH<sub>2</sub>)<sub>n</sub>NCOOR, X(CH<sub>2</sub>)<sub>n</sub>X(CH<sub>2</sub>)<sub>n</sub>XR, NR(CH<sub>2</sub>)<sub>n</sub>X(CH<sub>2</sub>)<sub>n</sub>OH, NR(CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>n</sub>OH, (CH<sub>2</sub>)<sub>n</sub>COOR, O(CO)NR(CH<sub>2</sub>) nOR, O(CO)(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, NR(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, NR(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, NI(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>]CO(CH<sub>2</sub>)<sub>n</sub>aryl, NI(CH<sub>2</sub>)<sub>n</sub>XR]CO(CH<sub>2</sub>)<sub>n</sub>aryl,

$$\begin{split} &N[(CH_2)_nXR]CO(CH_2)_n heteroaryl, \ N[(CH_2)_nNR_2]CO(CH_2)_n heteroaryl, \\ &N[(CH_2)_nNR_2]CO(CH_2)_nR^1, \ N(R)(CH_2)_nN(R)COOR, \ XCOO(CH_2)_nNR_2, \\ &OSO_2A, \ OSO_2CF_3, \ OSO_2Ar, \ OCONR_2 \ or \ OCH_2(CH_2)_nNR. \end{split}$$

30. (New) The compound of Claim 1 of formula IA4 or a pharmaceutically usable derivative, solvate, tautomer, salts, stereoisomer thereof or mixture thereof in any ratio

$$R^{1}$$
 $R^{3}$ 
 $R^{2}$ 
 $R^{7}$ 
 $R^{6}$ 
 $R^{6}$ 

in which

R<sup>1</sup> is A, CF<sub>3</sub>, OCF<sub>3</sub>, SA, SCN, CH<sub>2</sub>CN, -OCOA, Hal, SCF<sub>3</sub>, t-butyl, -CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, isopropyl, ethyl or methyl,

 $R^2$  is F or H,

R<sup>3</sup> is H.

 $R^a$  is 1-piperazinyl, N-morpholinyl, NHR or  $NR_2$ ,

R is H or A, in case of geminal radicals R is– $(CH_2)_5$ -, - $(CH_2)_4$ -, -  $(CH_2)_2$ -X- $(CH_2)_2$  or  $-(CH_2)_2$ -Z- $(CH_2)_n$ ,

A is alkyl or cycloalkyl, in which one or more H atoms are optionally replaced by Hal,

Hal is F or Cl,

X is O, S or NR,

Ζ is CH<sub>2</sub>, X, CHCONH<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NRCOOR, CHNRCOOR, NCO, CH(CH<sub>2</sub>)<sub>n</sub>COOR, NCOOR, CH(CH<sub>2</sub>)<sub>n</sub>OH, N(CH<sub>2</sub>)<sub>n</sub>OH, CHNH<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, CH(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>, C(OH)R, CHNCOR,  $CH(CH_2)_n$ -aryl,  $CH(CH_2)_n$ -heteroaryl,  $CH(CH_2)_nR^1$ ,  $N(CH_2)_nCOOR$ ,  $CH(CH_2)_nX(CH_2)_n$ -aryl,  $CH(CH_2)_nX(CH_2)_n$ heteroaryl, N(CH<sub>2</sub>)<sub>n</sub>CONR<sub>2</sub>, XCONR(CH<sub>2</sub>)<sub>n</sub>NR<sub>2</sub>,  $N[(CH_2)_nXCOOR]CO(CH_2)_n$ -aryl,  $N[(CH_2)_nXR]CO(CH_2)_n$ -aryl,  $N[(CH_2)_nXR]CO(CH_2)_nX$ -aryl,  $N[(CH_2)_nXR]SO_2(CH_2)_n$ -aryl,  $N[(CH_2)_nNRCOOR]CO(CH_2)_n$ -aryl,  $N[(CH_2)_nNR_2]CO(CH_2)_n$ aryl,  $N[(CH_2)_nNR_2]CO(CH_2)_nNR$ -aryl,  $N[(CH_2)_nNR_2]SO_2(CH_2)_n$ -aryl,  $N[(CH_2)_nXR]CO(CH_2)_n$ heteroaryl, N[(CH<sub>2</sub>)<sub>n</sub>XR]CO(CH<sub>2</sub>)<sub>n</sub>X-heteroaryl,  $N[(CH_2)_nXR]SO_2(CH_2)_n$ -heteroaryl,  $N[(CH_2)_nNRCOOR]CO(CH_2)_n$ -heteroaryl,  $N[(CH_2)_nNR_2]CO(CH_2)_n$ -heteroaryl,  $N[(CH_2)_nNR_2]CO(CH_2)_nNR$ -heteroaryl,  $N[(CH_2)_nNR_2]SO_2(CH_2)_n$ -heteroaryl,  $O(CH_2)_nNR_2$ .  $X(CH_2)_nNR_2$ , or  $NCO(CH_2)_nNR_2$ ,

R<sup>6</sup> is phenyl, 2-, 3- or 4-pyridyl, pyrimidyl, furyl or thienyl, each of which is unsubstituted or mono- or polysubstituted by Hal, NO<sub>2</sub>, CN, OH, CF<sub>3</sub>, OCH(CF<sub>3</sub>)<sub>2</sub>, OCOCH<sub>3</sub> or A,

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 $R^7$  is H or A

n is 0,1,2,3,4,5,6 or 7

or a pharmaceutically useable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture therefore in any ratio.

31. (New) The compound of claim 30 of the following formula or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or a mixture thereof in any ratio:

- 32. (New) The compound according to Claim 30, or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio, in which alkyl is methyl.
- 33. (New) The compound according to Claim 30 or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio in which

 $R^7$  is H.

34. (New) The compound according to Claim 30 or a pharmaceutically usable derivative, salt, solvate, tautomer, stereoisomer thereof or mixture thereof in any ratio, or optionally an excipient and/or an adjuvant, in a pharmaceutical composition.

35. (New) A mixture comprising the compound according to Claim 30 or a pharmaceutically usable derivative, solvate, tautomer, salt, stereoisomer thereof or mixture thereof in any ratio and a compound of formula V, or an analogue thereof or metabolite thereof

$$R^{11}$$
  $Y'$   $(CH_2)_p$   $Z'$   $R^8$   $V$ 

in which

Y' and Z' each, independently of one another, are O or N,  $R^9$  and  $R^{10}$  each, independently of one another, are H, OH, halogen, OC1-10-alkyl, OCF<sub>3</sub>, NO<sub>2</sub> or NH<sub>2</sub>, p is an integer between 2 and 6 inclusively, and  $R^8$  and  $R^{11}$  are each, independently of one another, in the meta- or para-position and are selected from the group consisting of:

- 36. (New) The mixture according to Claim 35, wherein the compound of formula V is pentamidine or a salt thereof.
- 37. (New) A method comprising, administering to a patient the compound according to Claim 30 or a pharmaceutically usable derivative, salt, solvate, tautomer, stereoisomer thereof or mixture thereof in any ratio, for

treatment of disease which can be influenced by the inhibition, regulation and/or modulation of mitotic motor protein Eg5.

- 38. (New) A method comprising administering to a patient the compound according to Claim 30, or a pharmaceutically usable derivative, salt, solvate, tautomer, stereoisomer thereof or mixture thereof in any ratio for treatment and prophylaxis of cancer.
- 39. (New) The method according to Claim 38, where the cancer is associated with squamous epithelium, bladder, stomach, kidneys, head and neck, oesophagus, cervix, thyroid, intestine, liver, brain, prostate, urogenital tract, lymphatic system, stomach, larynx and/or lung.
- 40. (New) The method according to Claim 39, where the cancer originates from monocytic leukaemia, lung adenocarcinoma, small-cell lung carcinoma, pancreatic cancer, glioblastomas and breast carcinoma and colon carcinoma.
- 41. (New) The method according to Claim 38, where the cancer to be treated is of blood and immune system.
- 42. (New) The method according to Claim 41, where the cancer originates from acute myelotic leukaemia, chronic myelotic leukaemia, acute lymphatic leukaemia and/or chronic lymphatic leukaemia.
- 43. (New) The method comprising administering to a patient a therapeutically effective amount of the compound according to Claim 30 or a pharmaceutically usable derivative, salt, solvate, tautomer, stereoisomer thereof or mixture thereof in any ratio, for treatment of cancer in

combination with a therapeutically effective amount of a compound of the formula V, or an analogue thereof and/or a metabolite thereof.

$$R^{11}$$
  $Y'$   $(CH_2)_p$   $Z'$   $R^8$ 

### in which

Y' and Z' each, independently of one another, are O or N,  $R^9$  and  $R^{10}$  each, independently of one another, are H, OH, halogen, OC1-10-alkyl, OCF<sub>3</sub>, NO<sub>2</sub> or NH<sub>2</sub>, p is an integer between 2 and 6 inclusively, and  $R^8$  and  $R^{11}$  are each, independently of one another, in the meta- or para-position and are selected from the group consisting of:

#### where

the compound of the formula V and the compound of the formula V, or analogue thereof and/or metabolites thereof are administered simultaneously or within 14 days of one another in amounts which are sufficient to inhibit the growth of a tumour or of other hyperproliferative cells.

- 44. (New) The method according to Claim 43, wherein the compound of the formula V used is pentamidine or a salt thereof.
- 45. (New) The method comprising administering to a patient the compound according to Claim 30 or a pharmaceutically usable salt, solvate, tautomer, stereoisomer thereof or mixture thereof in any ratio, for treatment of tumours where a therapeutically effective amount of the compound according to Claim 30 is administered in combination with radiotherapy or a compound selected from the group consisting of 1) an oestrogen receptor modulator, 2) an androgen receptor modulator, 3) a retinoid receptor modulator, 4) a cytotoxic agent, 5) an antiproliferative agent, 6) a prenyl-protein transferase inhibitor, 7) an HMG-CoA reductase inhibitor, 8) an HIV protease inhibitor, 9) a reverse transcriptase inhibitor and 10) an angiogenesis inhibitors.